

REMARKS

Reconsideration and allowance are requested. Claims 1 – 15 are pending. Claims 1, 6, 9, 11 and 14 are amended.

Power of Attorney and New Correspondence Address

Applicant submitted a new power of attorney and correspondence address in the previous response. However, the outstanding office action was sent to previous counsel. Applicant includes another copy of the power of attorney and highlights this change in the Patent Office records.

Objections to Claims 1 and 6

The Examiner objects to claims 1 and 6 for lacking antecedent basis for the term “n-dimensional parameter space.” Applicant has amended these claims and notes that this amendment is not for patentability and does not narrow the claim scope. The amendment to claim 11 is made for the same reasons as claims 1 and 6. Withdrawal of the objection is requested.

Clarification of Amendments to Claims 9 and 14

In response to the previous office action, Applicant amended claims 9 and 14 (and 4) to overcome the Section 112 rejection. However, with claims 9 and 14, Applicant inadvertently labeled the claims as “(original)”. The Examiner noted on page 2 of the outstanding office action that claims 3, 4 and 8 have been amended in the last response. Applicant includes amendments above to claims 9 and 14 as mentioned in the previous response and request entry of these amendments to complete the response to the previous Section 112 rejection.

Rejection of Claims 1, 3, 4, 6, 8, 9, 11, 13 and 14 Under Section 103

The Examiner rejects claims 1, 3, 4, 6, 8, 9, 11, 13 and 14 under Section 103 as being unpatentable over U.S. Patent No. 5,806,085 to Berliner ("Berliner") in view of U.S. Patent No. 6,449,695 to Bereznyi et al. ("Bereznyi et al."). Applicant respectfully traverses the Examiner's rejection and submits that there is no motivation or suggestion to combine Berliner with Bereznyi et al. as will be set forth below.

With respect to claims 1, 6 and 11, the Examiner rejected these claims based on a combination of Berliner with Bereznyi et al. The Examiner asserts that it would have been obvious to modify the caching system of Berliner to include the predetermined timing system of Bereznyi et al. because a system for cache space conversion could be implemented for better cache performance. Applicant traverses the Examiner's reasoning that one of skill in the art would be motivated to combine Berliner with Bereznyi et al. As shall be seen when the content and focus of each reference is properly analyzed, then it becomes clear that there is no reason to combine their teachings.

If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purposes, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Further, if the proposed modification of the prior art would change the principle operation of the prior art invention being modified, then the teaching of the reference is not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). The principles outlined in both these cases are applicable here.

Berliner teaches a method for non-volatile caching of network and CD-ROM file accesses using a local hard disk whereon a mini-database is created. Berliner notes in his introductory section (column 1) that in distributed networks such as connected LANs, data links between the LANs are slower than the interconnections between nodes in the LAN. He further notes that each data link between individual nodes within a LAN or network only has

a finite amount of data that can be simultaneously transferred via the link. In this context, he states:

Consequently, caching of data read over a network can generally increase system performance both by reducing data link loading and by providing the end user with a cache of rapidly accessible data. Col. 1, lines 62 - 65.

To prevent the re-transmission of data over a network link, Berliner's invention provides creating the mini-database on a local hard disk drive of the end user. See Abstract. Therefore, the intent and purpose of Berliner's invention is to provide a local hard disk drive that receives a mapping of data from a cache. The reason for having the local disk drive is to prevent the need for re-transmission of data over a network. As explained by Berliner, the network connection may be any network connection between nodes within a LAN or between LANs.

Applicant submits that the purpose and context of Berliner prevents one of skill in the art from having any motivation to combine his teachings with Berezhnyi et al. This is because Berezhnyi et al. focus on a distributed cache system. The summary of Berezhnyi et al.'s invention begins with the disclosure of the distributed cache system having a local cache and an array of remote caches. Each cache includes a cache controller and can access cached data from either its local cache or remote cache databases. See FIGS. 2, 3, 4. Col. 3, lines 60 - 64 of Berezhnyi et al. states that the configuration of the data cache enables multiple clients to access a single data cache or a single client to access multiple data caches. In this regard, Berezhnyi et al. teaches allowing a computer node to access data at a remote data cache on a network. Inherent in the invention of Berezhnyi et al. is the transmission of cached data over a computer network connecting the distributed caches. If Berezhnyi et al.'s principles were blended with Berliner, then the fundamental principles of one or both of the references would have to be modified.

For example, if the concept of a local hard disk to a data cache as taught by Berliner were incorporated into Berezhnyi et al., the purpose for Berliner's local hard disk would be

eliminated. Namely, if each node of a network having a data cache were to also have a local disk containing a mini-database as part of the cache, then the problem identified by Berliner would be exacerbated. As mentioned above, Berliner desired to prevent the re-transmission of data between nodes in a network, including a LAN network. If a first node in a network were to request transmission of data on a second remote node having a remote cache and a remote mini-database on a remote disk, this would increase the time necessary to read the data from the remote disk and transmit the data to the first node over the network. This is a process discouraged by Berliner.

Another reason urging against the combination of Berliner with Bereznyi et al. is that if the teachings of Bereznyi et al. were incorporated into Berliner, then the fundamental purposes of both references would be frustrated. For example, Berliner's entire purpose is to take a local cache database and provide a local hard disk where the mini-database of cached data may be stored. Berliner teaches that transmitting data over even a LAN network is bandwidth-limited and thus not desirable. In contrast, Bereznyi et al. teach a distributed caching system where cached data is transmitted via networked caches. If a feature taught by Bereznyi et al. such as checking if data has been requested within a predetermined amount of time were incorporated into Berliner, it would nevertheless require abandoning or modifying the fundamental distributed-cache concept. Applicant notes that MPEP 2143.01 requires the Examiner to take into consideration all the teachings of the prior art and weigh the power of each reference to suggest solutions to one of ordinary skill in the art. In other words, when the overall purpose of Bereznyi et al. is to provide a distributed cache network, one of skill in the art would not be motivated to search through Bereznyi et al. to identify one small component of the disclosure to combine with Berliner, which has a contrasting focus.

Therefore, Applicant submits that it would not be obvious to incorporate a network-distributed cache as taught by Bereznyi et al. into the invention of Berliner which is totally focused on a local hard disk solution to caching. Such a blending would require either

Berliner or Bereznyi et al. to abandon their principles to make such a combination workable. For these reasons, Applicant submits that there cannot be any motivation or suggestion to combine these references.

Therefore, Applicant submits that claims 1, 6 and 11 are patentable and in condition for allowance. The Examiner also rejected claims 3, 4, 8, 9, 13 and 14 in view of the combination of Berliner and Bereznyi et al. These claims are patentable as well and in condition for allowance.

Rejection of Claims 2, 5, 7, 10, 12 and 15 Under Section 103

The Examiner rejected claims 2, 5, 7, 10, 12 and 15 under Section 103 in view of Berliner, Bereznyi et al. and further in view of U.S. Patent No. 6,148,300 to Singhal et al. ("Singhal et al."). Applicant has set forth above why there is no motivation or suggestion to combine Berliner with Bereznyi et al. Those reasons are incorporated here and provide the basis to prevent the two primary references from being combined to reject claims 2, 5, 7, 10, 12 and 15. Further, Applicant submits that there is no motivation to combine Singhal et al. with Berliner and/or Bereznyi et al.

Singhal et al. disclose a hybrid queue and backoff computer resource lock feature. The queue controls the locking and access to memory locations within a computer. The problem addressed by Singhal et al. relates to the issues of using queue locks that require too much space and the incompatibility of queue locks with some synchronization library interface. See Col. 3, lines 57 - Col. 4, line 10. In Singhal et al., given their focus on controlling access to computer memory, the concept of caching is only given a passing reference. On figure 3 shows caches as part of the computer system, and the only mention of caching in the disclosure relates to the cache existing in the computer system where figure 3 is discussed and where the cache stores a copy of the state of a memory lock. See, e.g., Col. 6, lines 13 - 32.

Applicant submits that there is simply no motivation to incorporate the teachings of Singhal et al. that relate to the hybrid queuing and locking for computer memory access with the local hard disk cache of Berliner or the distributed caching system of Bereznyi et al. The focus of Singhal et al. is only passing in terms of any caching operation. Therefore, Applicant respectfully submits that claims 2, 5, 7, 10, 12 and 15 are patentable in that the references cited by the Examiner cannot be legally combined to arrive at the teachings of these claims.

CONCLUSION

Having addressed the rejection of claims, applicant respectfully submits that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

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